

or element is replaced upon completion of the conversion procedure, and the action results in proper functioning of the device or element when the motor vehicle operates on conventional fuel.

[75 FR 25691, May 7, 2010]

§§ 86.1855–86.1859 [Reserved]

§ 86.1860–04 How to comply with the Tier 2 and interim non-Tier 2 fleet average NO_x standards.

(a) The fleet average standards referred to in this section are the corporate fleet average standards for FTP exhaust NO_x emissions set forth in: § 86.1811–04(d) for Tier 2 LDV/Ts and MDPVs (0.07 g/mi); § 86.1811–04(l)(3) for interim non-Tier 2 LDV/LLDTs (0.30 g/mi); and, § 86.1811–04(l)(3) for interim non-Tier 2 HLDT/MDPVs (0.20 g/mi). Unless otherwise indicated in this section, the provisions of this section apply to all three corporate fleet average standards, except that the interim non-Tier 2 fleet average NO_x standards do not apply to a manufacturer whose U.S. LDV/T and MDPV sales are 100% Tier 2 LDV/Ts and MDPVs.

(b)(1) Each manufacturer must comply with the applicable fleet average NO_x standard, or standards, on a sales weighted average basis, at the end of each model year, using the procedure described in this section.

(2) During a phase-in year, the manufacturer must comply with the applicable fleet average NO_x standard for the required phase-in percentage for that year as specified in § 86.1811–04(k)(1), or for the alternate phase-in percentage as permitted under § 86.1811–04(k)(6).

(c)(1)(i) Each manufacturer must separately compute the sales weighted averages of the individual NO_x emission standards to which it certified all its Tier 2 vehicles, interim non-Tier 2 LDV/LLDTs, and interim non-Tier 2 HLDT/MDPVs of a given model year as described in § 86.1804(l)(2).

(ii) For model years up to and including 2008, manufacturers must compute separate NO_x fleet averages for Tier 2 LDV/LLDTs and Tier 2 HLDT/MDPVs.

(2)(i) For model years up to and including 2008, if a manufacturer certifies its entire U.S. sales of Tier 2 or interim non-Tier 2 LDV/LLDTs or interim non-Tier 2 HLDT/MDPVs, to full useful life

bins having NO_x standards at or below the applicable fleet average NO_x standard, that manufacturer may elect not to compute a fleet average NO_x level for that category of vehicles. A manufacturer making such an election must not generate NO_x credits for that category of vehicles for that model year.

(ii) For model years after 2008, if a manufacturer certifies its entire U.S. sales of Tier 2 vehicles to full useful life bins having NO_x standards at or below 0.07 gpm, that manufacturer may elect not to compute a fleet average NO_x level for its Tier 2 vehicles. A manufacturer making such an election must not generate NO_x credits for that model year.

(d) The sales weighted NO_x fleet averages determined pursuant to paragraph (c) of this section must be compared with the applicable fleet average standard; 0.07 g/mi for NO_x for Tier 2 LDV/Ts and MDPVs, 0.30 g/mi for NO_x for interim non-Tier 2 LDV/LLDTs, and 0.20 g/mi for NO_x for interim non-Tier 2 HLDT/MDPVs. Each manufacturer must comply on an annual basis with the fleet average standards by:

(1) Showing that its sales weighted average NO_x emissions of its LDV/LLDTs, HLDT/MDPVs or LDV/Ts, as applicable, are at or below the applicable fleet average standard; or

(2) If the sales weighted average is not at or below the applicable fleet average standard, by obtaining and applying sufficient Tier 2 NO_x credits, interim non-Tier 2 LDV/LLDT NO_x credits or interim non-Tier 2 HLDT/MDPV NO_x credits, as appropriate, and as permitted under § 86.1861–04.

(i) Manufacturers may not use NMOG credits generated under the NLEV program in subpart R of this part to meet any Tier 2 or interim non-Tier 2 NO_x fleet average standard.

(ii) Tier 2 NO_x credits may not be used to meet any fleet average interim non-Tier 2 NO_x standard except as permitted by § 86.1860–04(e)(1).

(iii) Interim non-Tier 2 NO_x credits may not be used to meet the Tier 2 fleet average NO_x standard.

(iv) Interim non-Tier 2 NO_x credits from HLDT/MDPVs may not be used to meet the fleet average NO_x standard for interim non-Tier 2 LDV/LLDTs, and interim non-Tier 2 credits from LDV/

LLDTs may not be used to meet the fleet average NO_x standard for interim non-Tier 2 HLD/MDPVs.

(e) (1) Manufacturers that cannot meet the requirements of paragraph (d) of this section, may carry forward a credit deficit for three model years, but must not carry such deficit into the fourth year. When applying credits to reduce or eliminate a deficit under the fleet average standard for interim LDV/LLDTs or interim HLD/MDPVs, that has been carried forward into a year subsequent to its generation, a manufacturer may apply credits from Tier 2 LDV/LLDTs or Tier 2 HLD/MDPVs, respectively, as well as from the appropriate group of interim vehicles. A manufacturer must not use interim credits to reduce or eliminate any NO_x credit deficit under the Tier 2 fleet average standard.

(2) A manufacturer carrying a credit deficit into the third year must generate or obtain credits to offset that deficit and apply them to the deficit at a rate of 1.2:1, (i.e. deficits carried into

the third model year must be repaid with credits equal to 120 percent of the deficit).

(3) A manufacturer must not bank credits for future model years or trade credits to another manufacturer during a model year into which it has carried a deficit.

(f) *Computing fleet average NO_x emissions.* (1) Manufacturers must separately compute these fleet NO_x averages using the equation contained in paragraph (f)(2) of this section:

(i) Their Tier 2 LDV/LLDT and Tier 2 HLD/MDPV fleet average NO_x emissions for each model year through 2008;

(ii) Their combined Tier 2 LDV/T and MDPV fleet average NO_x emissions for each model year after 2008;

(iii) Their interim non-Tier 2 LDV/LLDT fleet average NO_x emissions for each model year through 2006; and

(iv) Their interim non-Tier 2 HLD/MDPV fleet average NO_x emissions for each model year through 2008.

(2) The equation for computing fleet average NO_x emissions is as follows:

$$\frac{\sum (N \times \text{NO}_x \text{ emission standard})}{\text{Total number of vehicles of the appropriate category (e.g., all LDV/Ts and MDPVs, or interim non-Tier 2 HLD/MDPVs, etc.) sold including HEVs and ZEVs}}$$

Where:

N = The number of vehicles sold in the applicable category that were certified for each corresponding NO_x emission bin. N must be based on vehicles counted to the point of first sale.

Emission standard = The individual full useful life NO_x emission standard for each bin for which the manufacturer had sales.

(3) The results of the calculation in paragraph (f)(2) of this section must be rounded as required by § 86.1837-01.

(4) When approved in advance by the Administrator, the numerator in the equation in paragraph (f)(2) of this section may be adjusted downward by the product of the number of HEVs from each NO_x emission bin times a HEV NO_x contribution factor determined through mathematical estimation of the reduction in NO_x emissions over

the test procedure used to certify the HEVs. The reduction in NO_x emissions must be determined using good engineering judgement and reflect the relation in actual full useful life NO_x emissions to the full useful life NO_x standards for the certification bin applicable to the vehicles. The Administrator may require that calculation of the HEV NO_x contribution factor include vehicle parameters such as vehicle weight, portion of time during the test procedure that the HEV operates with zero exhaust emissions, zero emission range, NO_x emissions from fuel-fired heaters and NO_x emissions from electricity production and storage.

(g) *Additional credits for vehicles certified to 150,000 mile useful lives.* (1) A manufacturer may certify any test group to an optional useful life of 15

years or 150,000 miles, whichever occurs first.

(2)(i) For any test group certified to the optional 15 year/150,000 mile useful life, the manufacturer may generate additional NO_x credits, except as prohibited in paragraph (g)(3) of this section.

(ii) The manufacturer must calculate these extra NO_x credits, where permitted, by substituting an adjusted NO_x standard for the applicable NO_x standard from the full useful life certification bin when it calculates the applicable fleet average NO_x emissions by the procedure in paragraph (f) of this section. The adjusted standard must be equal to the applicable full useful life NO_x standard multiplied by 0.85 and rounded to one more decimal place than the number of decimal places as the applicable full useful life NO_x standard.

(3) A manufacturer electing not to comply with applicable intermediate life standards as permitted under § 86.1811-04(c)(4) may not generate additional credits from vehicles certified to a useful life of 15 years/150,000 miles; except that, for bins where such intermediate life standards do not exist or are specifically deemed to be optional in § 86.1811-04(c)(4), the manufacturer may generate additional NO_x credits from vehicles certified to a useful life of 15 years/150,000 miles.

(h) *Additional credits for vehicles certified to low bins.* A manufacturer may obtain additional NO_x credits by certifying vehicles to bins 1 and/or 2 in model years from 2001 through 2005 subject to the following requirements:

(1) When computing the fleet average Tier 2 NO_x emissions using the formula in paragraph (f)(2) of this section, the manufacturer may multiply the number of vehicles certified to bins 1 and 2 by the applicable multiplier shown in Table S04-11 when computing the denominator in the formula. These multipliers may not be used after model year 2005. The table follows:

TABLE S04-11—MULTIPLIERS FOR ADDITIONAL TIER 2 NO_x CREDITS FOR BIN 1 AND 2 LDV/TS

Bin	Model year	Multiplier 73
2	2001, 2002, 2003, 2004, 2005	1.5
1	2001, 2002, 2003, 2004, 2005	2.0

(2) Optionally, instead of the process described in paragraph (h)(1) of this section, when computing Tier 2 NO_x credits using the formula in § 86.1861-04(b)(1), the manufacturer may multiply the number of vehicles certified to bin 1 and bin 2 by the applicable multiplier shown in Table S04-11 in paragraph (h)(1) of this section when computing the “Total number of Tier 2 Vehicles Sold, Including ZEVs and HEVs”. These multipliers may not be used after model year 2005.

[65 FR 6866, Feb. 10, 2000, as amended at 66 FR 19310, Apr. 13, 2001]

§ 86.1861-04 How do the Tier 2 and interim non-Tier 2 NO_x averaging, banking and trading programs work?

(a) *General provisions for Tier 2 credits and debits.* (1) A manufacturer whose Tier 2 fleet average NO_x emissions exceeds the 0.07 g/mile standard must complete the calculation at paragraph (b) of this section to determine the size of its NO_x credit deficit. A manufacturer whose Tier 2 fleet average NO_x emissions is less than or equal to the 0.07 g/mile standard must complete the calculation in paragraph (b) of this section if it desires to generate NO_x credits. In either case, the number of credits or debits determined in the calculation at paragraph (b) of this section must be rounded to the nearest whole number.

(2) Credits generated according to the calculation in paragraph (b)(1) of this section may be banked for future use or traded to another manufacturer.

(3) NO_x credits are not subject to any discount or expiration date except as required under the deficit carryforward provisions of § 86.1860-04(e)(2).

(4) If a manufacturer calculates that it has negative credits (debits or a credit deficit) for a given model year, it must obtain sufficient credits, as required under § 86.1860-04(e)(2), from vehicles produced by itself or another manufacturer in a model year no later than the third model year following the model year for which it calculated the credit deficit. (Example: if a manufacturer calculates that it has a NO_x credit deficit for the 2008 model year, it must obtain sufficient NO_x credits to